

## The Incidence of Defensive Firearm Use by US Crime Victims, 1987 through 1990

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### ABSTRACT

It is well known that many crimes in the United States are committed with firearms. Less adequately documented is the frequency with which victims use guns in self-defense. We used National Crime Victimization Survey data to examine incidents where victims employed guns against offenders. Between 1987 and 1990 there were an estimated 258 460 incidents of firearm defense, an annual mean of 64 615. Victims used firearms in 0.18% of all crimes recorded by the survey and in 0.83% of violent offenses. Firearm self-defense is rare compared with gun crimes. (*Am J Public Health*. 1994;84:1982-1984)

### Introduction

Civilian firearm ownership in the United States carries with it the cost of criminal violence. In 1990, gun-wielding offenders victimized 817 200 persons, killing 12 800 and nonfatally injuring 239 400.<sup>1,2</sup> Observers often cite this carnage to justify stricter gun control policies.<sup>3</sup>

Yet guns also may have benefits in defending against crime. Armed victims can thwart offenders, perhaps averting injuries that they would otherwise have suffered. The prospect of firearm resistance may even prevent some crimes from occurring at all. Critics of firearm control often stress these possibilities.<sup>4</sup>

The incidence of firearm resistance is important in comparing the crime-related costs and benefits of private guns. Criminal offenders may be less likely to obey firearm laws than are other citizens. If firearm defense is common, limiting access to guns may then make the law-abiding population more vulnerable to harm.

We used the National Crime Victimization Survey to study defensive firearm use. We were interested in the incidence of defense and the situations in which it occurred.

### Methods

The National Crime Victimization Survey is a multistage probability sample of 59 000 housing units in the United States. It is conducted by the US Bureau of the Census for the US Bureau of Justice Statistics. Its primary use is to estimate the incidence of crime in the nation.<sup>2,5</sup>

Housing units remain in the National Crime Victimization Survey for 3 years, and residents aged 12 or older are interviewed at 6-month intervals. Respon-

dents who report an attempted or completed victimization answer detailed questions about the incident. The Victimization Survey gathers data on six crimes: rape, robbery, assault, burglary, personal and household larceny, and motor vehicle theft.

If victims report seeing an offender, Victimization Survey interviewers ask, "Was there anything you did or tried to do about the incident while it was going on?"<sup>5</sup> Victims who say that they took action then describe what they did. Interviewers code these responses into 1 or more of 16 categories, including "attacked offender with gun; fired gun" and "threatened offender with gun." The interviewers continue asking "anything else?" until the victims report no further action.

The survey follows these questions with an additional probe: "Did you do anything (else) with the idea of protecting yourself or your property while the incident was going on?" Again, victims who respond affirmatively are requested to describe their activities.

Our study examined the 4 years from 1987 through 1990. We measured firearm protection as an attempted or completed crime in which the victim reported using a gun to attack or threaten an offender.

Our estimates are criminal incident counts, weighted to represent the population at risk.<sup>2</sup> The estimates for personal crimes (robbery, rape, assault, and personal larceny) represent the resident noninstitutional population of the United

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States, aged 12 or older. The estimates for household crimes (burglary, household larceny, and motor vehicle theft) represent the nation's housing units. We computed standard errors by using the generalized variance formulas of the US Bureau of Justice Statistics.<sup>5</sup>

Unlike most published National Crime Victimization Survey estimates, we included series victimizations. These are three or more similar crimes that the victim cannot recall separately.<sup>5</sup> Because respondents cannot accurately describe each offense, we counted a series victimization as a single incident.

## Results

### National Crime Victimization Survey Estimates

From 1987 through 1990 there were an estimated 258 460 incidents of firearm resistance, a mean of 64 615 annually (Table 1). During the same period there were an estimated 143 995 448 incidents of crime. Thus, fewer than 2 victims in 1000 defended themselves with guns.

Considering violent crimes alone, an estimated 23 011 377 rapes, robberies, and assaults occurred over the period. Victims used firearms for self-defense in 190 483 of these (47 620 per year), 0.83 percent of the total.

The estimates for defense against rape, personal larceny, and motor vehicle theft each rest on fewer than 10 sample cases. The standard errors for these crimes should be cautiously interpreted, because 95% confidence intervals will include negative values.

About 71% of the defensive incidents involved crimes by strangers (Table 2). The remaining incidents with known relationships were divided almost evenly between casual acquaintances and persons well known to the victim. Victims shot at offenders in 71 549 incidents (17 887 per year), 28% of the cases.

The National Crime Victimization Survey includes self-defense by police officers in the line of duty. Although the survey does not provide detailed occupational information, we could identify government employees who used guns to resist crimes at work. There were an estimated 50 626 such incidents over the period, about 20% of the protective cases. If these incidents involve police officers—as seems likely—the annual estimate of *civilian* use drops to 51 959.

**TABLE 1—National Crime Victimization Survey Estimates of Number of Self-Defensive Firearm Incidents, by Type of Crime**

Type of Crime	No. of Incidents, 1987–1990	SE	Mean No. of Incidents per Year
Rape <sup>a</sup>	7 552	5 359	1 888.00
Robbery	30 900	9 505	7 725.00
Assault	152 031	30 290	38 007.75
Personal larceny <sup>a</sup>	2 056	3 581	514.00
Burglary	34 259	12 104	8 564.75
Household larceny	28 139	12 960	7 034.75
Motor vehicle theft <sup>a</sup>	3 523	3 660	880.75
Total	258 460	41 012	64 615.00

<sup>a</sup>Estimate based on fewer than 10 sample cases.

**TABLE 2—National Crime Victimization Survey Estimates of Number of Self-Defensive Firearm Incidents, by Victim–Offender Relationship and by Use of Gun**

	No. of Incidents, 1987–1990	SE	Mean No. of Incidents per Year
Relationship between victim and offender			
Stranger	182 368	34 452	45 592.00
Casual acquaintance	23 003	12 237	5 750.75
Well known	24 955	12 746	6 238.75
Undetermined	28 134	13 533	7 033.50
Manner in which victim used firearm			
Discharged firearm	71 549	21 581	17 887.25
Used firearm only to threaten offender	186 911	34 878	46 727.75

### Evaluation of Biases in the National Crime Victimization Survey Estimates

Assault is the least completely reported crime in the National Crime Victimization Survey, and underreporting is especially large for assaults by relatives and other nonstrangers.<sup>5,6</sup> If assaults involving firearm resistance are similar to other assaults, Victimization Survey estimates of gun defense will be downwardly biased.

According to our estimates, there was an annual mean of 1 886 incidents of firearm defense against assaults by friends and relatives. Although underreporting cannot be accurately measured, a rough way to gauge its effect is to weight these incidents by some correction factor.

One test of the accuracy of the National Crime Victimization Survey examined persons already known to be victims from records in police files.<sup>7</sup> These known victims reported to the survey only 22.2% of the domestic assaults recorded by the police. Applying a weight of 4.5

(that is, 1/.222) to defenses against assaults by family or friends increases the *total* annual estimate of firearm resistance to 71 216 incidents.

This “correction” is of limited value. Police records are themselves inaccurate, and other procedures would produce other results. Still, the correction emphasizes the infrequency of firearm defense against assaults by friends or family. More extreme weighting factors would not greatly change the findings.

Popular discussions of firearm resistance often concentrate on crimes by strangers. The National Crime Victimization Survey estimate of 45 592 annual incidents involving strangers is less vulnerable to response error than is the non-stranger estimate, and it is of considerable interest by itself.

Other sampling and nonsampling errors also affect the National Crime Victimization Survey. For example, the survey may often miss individuals involved in deviant or criminal lifestyles.<sup>8</sup> These

persons face high victimization risk, and omitting them might underestimate firearm defense. On the other hand, the Victimization Survey considers only the respondent's point of view, and in some assaults it is difficult to distinguish the victim from the offender. Here the survey might overestimate resistance.

We cannot assess the impact of these errors. Yet given the magnitude of the estimates, we believe that any bias more likely involves tens of thousands of incidents rather than hundreds of thousands.

## Discussion

Cook used the National Crime Victimization Survey to examine firearm defense against burglaries, robberies, and assaults.<sup>9</sup> Our results are compatible with his, but they consider a wider range of crimes.

Yet our estimates are much smaller than those by Kleck, who concluded that there may be one million defensive incidents each year.<sup>10,11</sup> Kleck's findings are widely cited in scholarly and popular media,<sup>12-17</sup> and it is useful to consider his procedures.

Kleck derived his estimates from a survey that posed the following question to 1228 registered voters<sup>18</sup>:

Within the past five years have you, yourself, or another member of your household used a handgun, even if it was not fired, for self-protection or for the protection of property at home, work, or elsewhere, excluding military service and police security work?

Four percent of the respondents reported handgun self-protection.

Kleck assumed that protective incidents were spread evenly over the 5 years and that households could experience only one incident. If this were true, a proportion of .008 households used handguns for protection each year. Kleck multiplied .008 by the number of households recorded in the 1980 census, and he weighted the result by estimates of national handgun and long-gun ownership. In two analyses with slightly different assumptions, Kleck computed total annual estimates of 999 068 and 783 000 incidents of firearm protection.

Unfortunately, Kleck's survey question did not confine self-defense to attempted victimizations. Merchants who arm themselves before making night bank deposits might view this as self-protection even if they have never encountered a robber. Motorists who carry guns in their cars might assert that they use the weapons for protection although they

have never displayed them. Persons who have used firearms to settle arguments might believe that they have prevented assaults. In a survey of prison inmates, 63% of those who fired guns during crimes described their actions as self-defense.<sup>19</sup>

Kleck's findings rest on 49 respondents, and any person who reported self-defense without a victimization would noticeably influence the results. National Crime Victimization Survey interviewers ask about self-defense only when respondents report a crime, and the survey screens out acts that are not illegal. We believe that the Victimization Survey provides a stronger basis for inference than do Kleck's methods.

## Implications of the National Crime Victimization Survey Estimates

The National Crime Victimization Survey estimates imply that firearms should not be disregarded as a defense against crime. From 1987 through 1990, there were an estimated 258 460 incidents of armed resistance. In 71 549 of these, victims believed themselves to be in enough peril to fire their weapons.

Yet the results also show that defensive gun use is infrequent compared with the incidence of crime. The National Crime Victimization Survey yields an estimate of 2 628 532 nonfatal gun crimes from 1987 through 1990. Adding to this the 46 319 firearm homicides over the period, gun offenses exceeded protective incidents by more than 10 to 1.<sup>1,20-22</sup>

Further, there were an estimated 500 206 National Crime Victimization Survey incidents in which the offender shot at or wounded the victim. Including homicides, criminal shootings were thus 7.6 times more frequent than were shootings in self-defense.

Altogether, our results suggest that criminals face little threat from armed victims. The probability of firearm resistance is not zero. Yet given that half of US households own a gun, armed self-defense is extremely uncommon.<sup>9</sup> Coupled with the risks of keeping a gun for protection, these results raise questions about the collective benefits of civilian firearm ownership for crime control.<sup>23-26</sup> □

## References

1. *Crime in the United States, 1990*. Washington, DC: Federal Bureau of Investigation; 1991.
2. *National Crime Surveys: National Sample,*

1986-1991 [near-term data]. Washington, DC: US Bureau of Justice Statistics; 1992. Computer files. Distributed by the Inter-university Consortium for Political and Social Research, Ann Arbor, Mich.

3. Kassirer JP. Firearms and the killing threshold. *N Engl J Med*. 1991;325:1647-1649.
4. Baker JJ. Second amendment message in Los Angeles. *Am Rifleman*. 1992;140:32-35.
5. *Criminal Victimization in the United States, 1991*. Washington, DC: US Bureau of Justice Statistics; 1992.
6. Skogan WG. *Issues in the Measurement of Victimization*. Washington, DC: US Dept of Justice; 1981.
7. Turner AG. The San Jose recall study. In: Lehnen RG, Skogan WG, eds. *The National Crime Survey: Working Papers*, Vol 1. Washington, DC: US Dept of Justice; 1981.
8. Cook PJ. The case of the missing victims: gunshot woundings in the National Crime Survey. *J Quant Criminology*. 1985;1:91-102.
9. Cook PJ. The technology of personal violence. In: Tonry M, ed. *Crime and Justice: An Annual Review of Research*, Vol 14. Chicago, Ill: University of Chicago Press; 1991:1-71.
10. Kleck G. Crime control through the private use of armed force. *Soc Probl*. 1988;35:1-21.
11. Kleck G. *Point Blank: Guns and Violence in America*. New York, NY: Aldine De Gruyter; 1991.
12. Suter EA. Firearms and the killing threshold. *N Engl J Med*. 1992;326:1159. Letter.
13. Kates DB. The value of civilian handgun possession as a deterrent to crime or a defense against crime. *Am J Criminal Law*. 1991;18:113-167.
14. Go ahead, make our day. *The New Republic*. February 22, 1988:7-9.
15. Do guns save lives? *Time*. August 12, 1988:25-26.
16. Will GF. Are we "a nation of cowards?" *Newsweek*. November 15, 1993:93-94.
17. Kopel DB. Hold your fire: gun control won't stop rising violence. *Policy Rev*. 1993;63:58-65.
18. *Study 1760, Violence in America* [photocopied questionnaire and marginal distributions]. Washington, DC: Peter D. Hart Research Associates, Inc; 1981.
19. Wright JD, Rossi PH. *Armed and Considered Dangerous: A Survey of Felons and Their Firearms*. New York, NY: Aldine De Gruyter; 1986.
20. *Crime in the United States, 1987*. Washington, DC: Federal Bureau of Investigation; 1988.
21. *Crime in the United States, 1988*. Washington, DC: Federal Bureau of Investigation; 1989.
22. *Crime in the United States, 1989*. Washington, DC: Federal Bureau of Investigation; 1990.
23. Kellermann AL, Reay DT. Protection or peril? An analysis of firearm-related deaths in the home. *N Engl J Med*. 1986;314:1557-1560.
24. Wintemute GJ, Teret SP, Kraus JF, Wright MA, Bradfield G. When children shoot children: 88 unintended deaths in California. *JAMA*. 1987;257:3107-3109.
25. Kellermann AL, Rivara FP, Somes G, et al. Suicide in the home in relation to gun ownership. *N Engl J Med*. 1992;327:467-472.
26. Kellermann AL, Rivara FP, Rushforth NB, et al. Gun ownership as a risk factor for homicide in the home. *N Engl J Med*. 1993;329:1084-1091.